Beverly Hills High School -- Algebra 1 -- Test #3 -- Chapter 2 -- 100 points

ALWAYS SHOW YOUR WORK. Partial credit for partial performance. Pencils only. Be clear, complete and neat. All problems are five points unless specified otherwise. Always state units and reduce fractions, too.

Solve all equations for x, y or z as indicated in each example.

1) $-3x + 8 = 23$

2) $\frac{y}{7} + 2 = -3$

3) $6(z + 2) - 4(2z + 3) = 0$

4) $.25x - .15 = .6$

5) $\frac{2y}{3} + \frac{1}{4} = 1$

6) $4v + pz = 2z - 5$

7) $4(4 - 4x) = -10 - 16x$

8) $\frac{3}{5}y - 2 = 3 + \frac{2}{5}y$

9) $2z + 3 = \frac{z - 4}{2}$

10) $3x - \frac{7}{6} = \frac{3}{2}$

11) $2(y - 6) - 3(6 - y) + 26 = y$

12) $7(8 + 2z) = 54 + 14z$

13) Solve and check the following equation.

$3.6n = 5.4 + 3.3n$

14) What TWO properties do you use to solve

$\frac{t}{14} + 11 = 62$?

15) What is the perimeter of a rectangle whose diagonal is 25 inches and has a length of 24 inches?

16) A man invests $6000 for 4 years. He earns simple interest of $1320. At what rate did he earn interest?

17) Sometimes the surface of Venus can be as hot as 950 °F. What is that in °C?

18) Jim leaves his house jogging at 8 am exactly. He jogs at 4 miles per hour. At 8:12 am, his brother Steve runs after him. If he catches Jim at exactly 8:42 am, how fast was Steve running?

Solve for x.

19) $5(x + 4) - 6x = -24$

20) $m = (\frac{x - 3}{y})z$